

ABSTRACT OF THE DISCLOSURE

A mobile unit moves on a reference plane. The mobile unit has an object detection apparatus for detecting an object on the reference plane. The object detection apparatus includes a camera, a mirror, and a computer. The mirror cuts an image received by the camera such that the camera receives an image that is divided into a reference plane image and an object image. The reference plane image contains the reference plane. The object image contains the object and does not contain the reference plane. Therefore, the distance measuring apparatus can easily separate the region including the object and the region including no object, and accurately detect the distance to the object.